

**CLAIMS:**

1. Apparatus for preparing potato chips, said apparatus having a slicer for the slicing of potatoes, means for conveying sliced potatoes through a heated oil bath and for removal of cooked potato chips from the heated oil bath, said slicer comprising a knife blade that rotates at the lower end of a hopper for potatoes, the knife blade being adapted to slice potatoes, the sliced potatoes being fed to the heated bath, the speed of rotation of the knife blade being adapted to be controlled so that the knife blade is stationary when the temperature of the oil bath is below a pre-determined temperature, and the speed of rotation of the knife blade being adapted to be further controlled so that the speed of rotation increases as the temperature is increased above said pre-determined temperature.
2. The apparatus of Claim 1 in which the knife blade is adapted to slice potatoes and feed each slice potato separately to the oil bath.
3. The apparatus of Claim 1 or Claim 2 in which the oil is adapted to be heated using an electric heat exchanger.
4. The apparatus of Claim 1 or Claim 2 in which the oil is adapted to be heated using gas.
5. A method for the preparation of potato chips in apparatus comprising a slicer for the slicing of potatoes, means for conveying sliced potatoes through a heated oil bath and for removal of cooked potato chips from the heated oil bath, said slicer comprising a knife blade that rotates at the lower end of a hopper for potatoes, the knife blade being adapted to slice potatoes, the sliced potatoes being fed to the heated bath, said method comprising causing the knife blade to be stationary when the temperature of the oil bath is below a pre-determined temperature, rotating the knife blade when said temperature is at or above said pre-determined temperature and increasing the speed of rotation of the knife blade as the temperature is increased above said pre-determined temperature.
6. The method of Claim 5 in which each of said sliced potatoes is

fed separately to the oil bath.

7. The method of Claim 5 in which said predetermined temperature is about 170°C.

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8. The method of Claim 7 in which the rotation of the knife blade ceases if the temperature increases to about 195°C or above.

9. A slicer for preparing potato chips, comprising:  
10 a rotatable disc having a radial slot therein and a slicing blade projecting above the plane of the disc; and  
a chute for downwardly conveying potatoes to said rotatable disc;  
an orifice between said chute and said rotatable disc, said slicer having  
15 at least one of said orifice having a shape that decreases in width in the direction of rotation of the rotatable disc and said chute decreasing in depth in the direction of rotation of the rotatable disc.

10. The slicer of Claim 9 which the chute decreases in depth in the direction of rotation of the rotatable disc.

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11. The slicer of Claim 9 which the chute decreases in width in the direction of rotation of the rotatable disc.

12. The slicer of Claim 9 in which the orifice is in an ovate shape of decreasing width in the direction of rotation of the slicing blade.

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13. The slicer of Claim 9 or Claim 12 in which the chute is at an acute angle with respect to the direction of rotation of the disc.

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14. The slicer of Claim 13 in which the chute terminates in a housing covering and conforming to the said ovate shape.

15. Apparatus for the preparing of potato chips, having a potato slicer, a heated oil bath, a conveyor for the conveying of potato slices through  
35 the heated oil bath and means for the removal of cooked potato chips from the heated oil bath, in which the slicer for preparing said potato chips

comprises (i) a rotatable disc having a radial slot therein and a slicing blade projecting above the plane of the disc; and (ii) a chute for downwardly conveying potatoes to said rotatable disc;

5 an orifice between said chute and said rotatable disc, said slicer having at least one of said orifice having a shape that decreases in width in the direction of rotation of the rotatable disc.

10 16. The apparatus of Claim 13 in which the oil is adapted to be heated using an electric heat exchanger.

17. The apparatus of Claim 13 in which the oil is adapted to be heated using gas.

15 18. The apparatus of any one of Claims 15-17 which the chute decreases in depth in the direction of rotation of the rotatable disc.

19. The apparatus of any one of Claims 15-18 which the orifice decreases in width in the direction of rotation of the rotatable disc.

20 20. The apparatus of any one of Claims 15-19 in which the orifice is in an ovate shape of decreasing width in the direction of rotation of the slicing blade.

25 21. The apparatus of any one of Claims 15-20 in which an orifice is located between said chute and said rotatable disc, said orifice having a shape that decreases in width in the direction of rotation of the rotatable disc.

30 22. The apparatus of Claim 21 in which the chute has an elbow therein.

23. A method for the preparing of potato chips in apparatus having a potato slicer, a heated oil bath, a conveyor for the conveying of potato slices through the heated oil bath and means for the removal of cooked potato chips from the heated oil bath, in which the slicer for preparing said potato chips comprises (i) a rotatable disc having a radial slot therein and a slicing blade projecting above the plane of the disc; and (ii) a chute for

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downwardly conveying potatoes to said rotatable disc;

an orifice between said chute and said rotatable disc, said slicer having at least one of said orifice having a shape that decreases in width in the direction of rotation of the rotatable disc; and said chute decreasing in depth  
5 in the direction of rotation of the rotatable disc;

said method comprising feeding potatoes into the chute of the potato slicer, rotating said disc having the blade extending upwards therefrom by means of which each said potato to be sliced is urged into the narrow end of the tear drop and sliced by said blade, submerging said sliced potato chip in  
10 the heated oil bath and removing said potato chip when cooked.

24. The method of Claim 23 in which the orifice is an ovate shape of decreasing width in the direction of rotation of the blade.

15 25. A chute for downwardly conveying potatoes to a rotatable disc; an orifice between said chute and said rotatable disc, said orifice having a shape that decreases in width in the direction of rotation of the rotatable disc.

20 26. The chute of Claim 25 in which the orifice is in an ovate shape of decreasing width in the direction of rotation of the slicing blade.

27. The chute of Claim 26 in which the chute has an elbow therein.

25 28. Apparatus for preparing foodstuffs, said apparatus having means for conveying said foodstuffs through a heated oil bath and for removal of cooked foodstuffs from the heated oil bath, said apparatus having a hopper for the foodstuffs and a conveyor belt for feeding foodstuffs to the heated bath, the speed of conveying of the foodstuffs being controlled so that  
30 the conveyor is stationary when the temperature of the oil bath is below a pre-determined temperature, and the speed of the conveyor being further controlled so that the speed increases as the temperature is increased above said pre-determined temperature.

35 29. Apparatus of Claim 28 in which the foodstuffs are corn chips or tortilla chips.

30. A method for the preparation of foodstuffs in apparatus comprising means for conveying the foodstuffs through a heated oil bath and for removal of cooked foodstuffs from the heated oil bath, said foodstuffs  
5 being fed to the heated bath on a conveyor, said method comprising causing the conveyor to be stationary when the temperature of the oil bath is below a pre-determined temperature, and to feed foodstuffs when said temperature is at or above said pre-determined temperature and increasing the speed of  
10 conveying the foodstuffs as the temperature is increased above said pre-determined temperature.

31. The method of Claim 30 in which the foodstuffs are corn chips or tortilla chips.